



#10

313.2C1.TXT

## SEQUENCE LISTING

<110> Burton, Dennis R  
Barbas, Carlos F  
Lerner, Richard A

<120> HUMAN NEUTRALIZING MONOCLONAL ANTIBODIES  
TO HUMAN IMMUNODEFICIENCY VIRUS

<130> 313.2CON1

<140> US 10/016,986  
<141> 2001-12-12

<150> US 09/149,898  
<151> 1998-09-08

<150> US 08/899,575  
<151> 1997-07-24

<150> US 08/276,852  
<151> 1994-07-18

<150> US 08/178,302  
<151> 1994-01-06

<150> PCT/US93/09328  
<151> 1993-09-30

<150> US 07/954,148  
<151> 1992-09-30

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 35 40 45  
 Ser Glu Gly Gly Gly Ser Gly Gly Gly Ser Gly Ser Gly Asp Phe Asp  
 50 55 60  
 Tyr Glu Lys Met Ala Asn Ala Asn Lys Gly Ala Met Thr Glu Asn Ala  
 65 70 75 80  
 Asp Glu Asn Ala Leu Gln Ser Asp Ala Lys Gly Lys Leu Asp Ser Val  
 85 90 95  
 Ala Thr Asp Tyr Gly Ala Ala Ile Asp Gly Phe Ile Gly Asp Val Ser  
 100 105 110  
 Gly Leu Ala Asn Gly Asn Gly Ala Thr Gly Asp Phe Ala Gly Ser Asn  
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 145 150 155 160  
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 Asp Lys Ile Asn Leu Phe Arg Gly Val Phe Ala Phe Leu Leu Tyr Val  
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 35 40 45  
 Ile Gly Gly Ile Thr Pro Thr Ser Gly Ser Ala Asp Tyr Ala Gln Lys  
 50 55 60  
 Phe Gln Gly Arg Val Thr Ile Ser Ala Asp Arg Phe Thr Pro Ile Leu  
 65 70 75 80  
 Tyr Met Glu Leu Arg Ser Leu Arg Ile Glu Asp Thr Ala Ile Tyr Tyr  
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 Cys Ala Arg Glu Arg Arg Glu Arg Gly Trp Asn Pro Arg Ala Leu Arg  
 100 105 110  
 Gly Ala Leu Asp Phe Trp Gly Gln Gly Thr Arg Val Phe Val Ser Pro  
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 35 40 45  
 Met Gly Gly Ile Thr Pro Thr Ser Gly Thr Ala Thr Tyr Ser Gln Lys  
 50 55 60  
 Phe Gln Gly Arg Val Thr Ile Ser Ala Ala Pro Leu Thr Pro Ile Ile  
 65 70 75 80  
 Tyr Met Glu Leu Arg Ser Leu Arg Asp Asp Asp Thr Ala Val Tyr Tyr  
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 35 40 45  
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 50 55 60  
 Phe Gln Gly Arg Val Thr Ile Ser Ala Asp Arg Phe Thr Pro Ile Leu  
 65 70 75 80  
 Tyr Met Glu Leu Arg Ser Leu Arg Ile Glu Asp Thr Ala Ile Tyr Tyr  
 85 90 95  
 Cys Ala Arg Glu Arg Arg Glu Arg Gly Trp Asn Pro Arg Ala Leu Arg  
 100 105 110  
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 115 120 125

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 35 40 45  
 Met Gly Gly Ile Thr Pro Thr Ser Gly Ser Ala Asp Tyr Ala Gln Lys  
 50 55 60  
 Phe Gln Gly Arg Val Thr Ile Ser Ala Asp Ala Thr Pro Arg Val  
 65 70 75 80  
 Tyr Met Glu Leu Arg Ile Leu Arg Ser Glu Asp Thr Ala Val Tyr Phe  
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&lt;400&gt; 57

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			20					25					30		
Tyr	Ala	Val	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Trp
		35					40					45			
Met	Gly	Gly	Ile	Thr	Pro	Thr	Ser	Gly	Thr	Ala	Thr	Tyr	Ser	Gln	Lys
	50					55					60				
Phe	Gln	Gly	Arg	Val	Thr	Ile	Ser	Ala	Ala	Pro	Leu	Thr	Pro	Ile	Ile
65					70					75					80
Tyr	Met	Glu	Leu	Arg	Ser	Leu	Arg	Asp	Asp	Asp	Thr	Ala	Val	Tyr	Tyr
				85					90					95	
Cys	Ala	Arg	Glu	Arg	Arg	Glu	Arg	Gly	Trp	Asn	Pro	Arg	Ala	Leu	Val
			100					105					110		
Gly	Ala	Leu	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Ile	Val	Ser	Ser
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&lt;210&gt; 58

&lt;211&gt; 128

&lt;212&gt; PRT

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&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 58

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			20					25					30		
His	Ala	Ile	Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	Glu	Tyr
		35					40					45			
Met	Gly	Gly	Ile	Thr	Pro	Thr	Ser	Gly	Thr	Ala	Asp	Tyr	Ala	Gln	Lys
	50					55					60				
Phe	Gln	Ala	Arg	Val	Thr	Ile	Ser	Ala	His	Glu	Phe	Thr	Pro	Ile	Val
65					70					75					80
Tyr	Met	Glu	Leu	Arg	Ser	Leu	Arg	Ser	Asp	Gln	His	Ala	Thr	Tyr	Tyr
				85					90					95	
Cys	Ala	Thr	Glu	Arg	Arg	Glu	Arg	Gly	Trp	Asn	Pro	Arg	Ala	Leu	Arg
			100					105					110		
Gly	Ala	Leu	Asp	Ile	Trp	Gly	Gln	Gly	Thr	Thr	Val	Ile	Val	Ser	Ser
		115					120					125			

&lt;210&gt; 59

&lt;211&gt; 128

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&lt;223&gt; Synthesized

&lt;400&gt; 59

Leu	Glu	Glu	Ser	Gly	Gly	Arg	Leu	Val	Lys	Pro	Gly	Gly	Ser	Leu	Arg
1				5					10					15	
Leu	Ser	Cys	Glu	Gly	Ser	Gly	Phe	Thr	Phe	Thr	Asn	Ala	Trp	Met	Thr
			20					25					30		
Trp	Val	Arg	Gln	Ser	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	Ala	Ser	Ile

## 313.2C1.TXT

```

      35      40      45
Lys Ser Lys Phe Asp Gly Gly Ser Pro His Tyr Ala Ala Pro Val Glu
  50      55      60
Gly Arg Phe Ser Ile Ser Arg Asn Asp Leu Glu Asp Lys Met Phe Leu
  65      70      75      80
Glu Met Ser Gly Leu Lys Ala Glu Asp Thr Gly Val Tyr Tyr Cys Ala
      85      90      95
Thr Lys Tyr Pro Arg Tyr Ser Asp Met Val Thr Gly Val Arg Asn His
      100      105      110
Phe Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Ile Val Ser Ser
      115      120      125

```

<210> 60  
 <211> 128  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 60
Leu Glu Gln Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg
  1      5      10      15
Leu Ser Cys Glu Gly Ser Gly Phe Thr Phe Thr Asn Ala Trp Met Thr
      20      25      30
Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Val Ala Ser Ile
      35      40      45
Lys Ser Lys Phe Asp Gly Gly Ser Pro His Tyr Ala Ala Pro Val Glu
      50      55      60
Gly Arg Phe Thr Ile Ser Arg Asn Asp Leu Glu Asp Lys Leu Phe Leu
      65      70      75      80
Glu Met Ser Gly Leu Lys Ala Glu Asp Thr Gly Val Tyr Tyr Cys Ala
      85      90      95
Thr Lys Tyr Pro Arg Tyr Phe Asp Met Met Ala Gly Val Arg Asn His
      100      105      110
Phe Tyr Met Asp Val Trp Gly Thr Gly Thr Thr Val Ile Val Ser Ser
      115      120      125

```

<210> 61  
 <211> 128  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 61
Leu Glu Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg
  1      5      10      15
Leu Ser Cys Glu Gly Ser Gly Phe Thr Phe Thr Asn Ala Trp Met Thr
      20      25      30
Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Val Ala Ser Ile
      35      40      45
Lys Ser Lys Phe Asp Gly Gly Ser Pro His Tyr Ala Ala Pro Val Glu
      50      55      60
Gly Arg Phe Thr Ile Ser Arg Asn Asp Leu Glu Asp Lys Leu Phe Leu
      65      70      75      80
Glu Met Ser Gly Leu Lys Ala Glu Asp Thr Gly Val Tyr Tyr Cys Ala
      85      90      95
Thr Lys Tyr Pro Arg Tyr Ser Asp Met Met Ala Gly Val Arg Asn His
      100      105      110

```

## 313.2C1.TXT

Leu Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Ile Val Ser Ser  
 115 120 125

<210> 62  
 <211> 128  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 62  
 Leu Glu Glu Ser Gly Gly Arg Leu Val Lys Pro Gly Gly Ser Leu Arg  
 1 5 10 15  
 Leu Ser Cys Glu Ala Ser Gly Phe Thr Phe Thr Asn Ser Trp Met Thr  
 20 25 30  
 Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Val Ala Ser Ile  
 35 40 45  
 Lys Arg Lys Phe Asp Gly Gly Ser Pro His Tyr Ala Ala Pro Val Glu  
 50 55 60  
 Gly Arg Phe Ser Ile Ser Arg Asn Asp Leu Glu Asp Lys Met Phe Leu  
 65 70 75 80  
 Glu Met Ser Gly Leu Lys Ala Glu Asp Thr Gly Val Tyr Tyr Cys Ala  
 85 90 95  
 Thr Lys Tyr Pro Arg Tyr Ser Asp Met Met Thr Gly Val Arg Asn His  
 100 105 110  
 Phe Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Ile Val Ser Ser  
 115 120 125

<210> 63  
 <211> 128  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 63  
 Leu Glu Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg  
 1 5 10 15  
 Leu Ser Cys Glu Ser Ser Gly Phe Thr Phe Thr Asn Ala Trp Met Thr  
 20 25 30  
 Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Val Ala Ser Ile  
 35 40 45  
 Lys Ser Lys Phe Asp Gly Gly Ser Pro His Tyr Ala Ala Pro Val Glu  
 50 55 60  
 Gly Arg Phe Thr Ile Ser Arg Asn Asp Leu Glu Asp Lys Leu Phe Leu  
 65 70 75 80  
 Glu Met Ser Gly Leu Lys Ala Glu Asp Thr Gly Val Tyr Tyr Cys Ala  
 85 90 95  
 Thr Lys Tyr Pro Arg Tyr Ser Asp Met Met Ala Gly Val Arg Asn His  
 100 105 110  
 Phe Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Ile Val Ser Ser  
 115 120 125

<210> 64  
 <211> 128  
 <212> PRT  
 <213> Artificial Sequence



&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 64

Leu	Glu	Glu	Ser	Gly	Gly	Arg	Leu	Val	Lys	Pro	Gly	Gly	Ser	Leu	Arg
1				5					10					15	
Leu	Ser	Cys	Glu	Gly	Ser	Gly	Phe	Thr	Phe	Thr	Asn	Ala	Trp	Met	Thr
			20					25					30		
Trp	Val	Arg	Gln	Ser	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	Ala	Ser	Ile
		35					40					45			
Lys	Ser	Lys	Phe	Asp	Gly	Gly	Ser	Pro	His	Tyr	Ala	Ala	Pro	Val	Glu
	50				55						60				
Gly	Arg	Phe	Ser	Ile	Ser	Arg	Asn	Asp	Leu	Glu	Asp	Lys	Met	Phe	Leu
65					70					75					80
Glu	Met	Ser	Gly	Leu	Lys	Ala	Glu	Asp	Thr	Gly	Val	Tyr	Tyr	Cys	Ala
			85					90						95	
Thr	Lys	Tyr	Pro	Arg	Tyr	Ser	Asp	Met	Met	Thr	Gly	Val	Arg	Asn	His
			100					105					110		
Phe	Tyr	Met	Asp	Val	Trp	Gly	Lys	Gly	Thr	Thr	Val	Ile	Val	Ser	Ser
		115					120					125			

&lt;210&gt; 65

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 65

Leu	Glu	Glu	Ser	Gly	Gly	Gly	Leu	Val	Lys	Pro	Gly	Gly	Ser	Leu	Arg
1				5					10					15	
Leu	Ser	Cys	Ala	Gly	Ser	Gly	Phe	Thr	Phe	Thr	Asn	Ala	Trp	Met	Thr
			20					25					30		
Trp	Val	Arg	Gln	Ser	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	Ala	Ser	Ile
		35					40					45			
Lys	Ser	Lys	Phe	Asp	Gly	Gly	Ser	Ser	His	Tyr	Pro	Gly	Pro	Val	Glu
	50				55						60				
Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asn	Tyr	Ile	Glu	Asp	Lys	Leu	Phe	Leu
65					70					75					80
Glu	Met	Ser	Gly	Leu	Lys	Ala	Glu	Asp	Thr	Gly	Val	Tyr	Tyr	Cys	Ala
			85					90						95	
Thr	Lys	Tyr	Pro	Arg	Tyr	Tyr	Asp	Met	Met	Arg	Gly	Val	Arg	Asn	His
			100					105					110		
Tyr	Tyr	Met	Asp	Val	Trp	Gly	Lys	Gly	Thr	Thr	Val	Ile	Val	Ser	Ser
		115					120					125			

&lt;210&gt; 66

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 66

Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala	Ser	Val	Lys
1				5					10					15	
Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn	Phe	Val	Ile	His
			20					25					30		
Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Arg	Phe	Glu	Trp	Met	Gly	Trp	Ile

		35				40					45				
Asn	Pro	Tyr	Asn	Gly	Asn	Lys	Glu	Phe	Ser	Ala	Lys	Phe	Gln	Asp	Arg
	50					55					60				
Val	Thr	Phe	Thr	Ala	Asp	Thr	Ser	Ala	Asn	Thr	Ala	Tyr	Met	Glu	Leu
65					70					75					80
Arg	Ser	Leu	Arg	Ser	Ala	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Val
				85					90					95	
Gly	Pro	Tyr	Ser	Trp	Asp	Asp	Ser	Pro	Gln	Asp	Asn	Tyr	Tyr	Met	Asp
			100					105					110		
Val	Trp	Gly	Lys	Gly	Thr	Thr	Val	Ile	Val	Ser	Ser				
		115					120								

```
<210> 67
<211> 124
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthesized

<400>	67														
Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala	Ser	Val	Lys
1				5					10					15	
Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn	Phe	Val	Ile	His
			20					25					30		
Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Arg	Phe	Glu	Trp	Met	Gly	Trp	Ile
		35					40					45			
Asn	Pro	Tyr	Asn	Gly	Asn	Lys	Glu	Phe	Ser	Ala	Lys	Phe	Gln	Asp	Arg
	50					55					60				
Val	Thr	Phe	Thr	Ala	Asp	Thr	Asp	Ala	Asn	Thr	Ala	Tyr	Met	Glu	Leu
65				70						75				80	
Arg	Ser	Leu	Arg	Ser	Ala	Asp	Thr	Ala	Ile	Tyr	Tyr	Cys	Ala	Arg	Val
				85					90					95	
Gly	Pro	Tyr	Thr	Trp	Asp	Asp	Ser	Pro	Gln	Asp	Asn	Tyr	Tyr	Met	Asp
			100					105					110		
Val	Trp	Gly	Lys	Gly	Thr	Lys	Val	Ile	Val	Ser	Ser				
		115					120								

```
<210> 68
<211> 124
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthesized

<400>	68														
Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly	Ala	Ser	Val	Lys
1				5					10					15	
Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn	Phe	Val	Ile	His
			20					25					30		
Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Arg	Phe	Glu	Trp	Met	Gly	Trp	Ile
		35					40					45			
Asn	Pro	Tyr	Asn	Gly	Asn	Lys	Glu	Phe	Ser	Ala	Lys	Phe	Gln	Asp	Arg
	50					55					60				
Val	Thr	Phe	Thr	Ala	Asp	Thr	Asp	Ala	Asn	Thr	Ala	Tyr	Met	Glu	Leu
65					70					75					80
Arg	Ser	Leu	Arg	Ser	Thr	Asp	Thr	Ala	Ile	Tyr	Tyr	Cys	Ala	Arg	Val
				85					90					95	
Gly	Pro	Tyr	Thr	Trp	Asp	Asp	Ser	Pro	Gln	Asp	Asn	Tyr	Tyr	Met	Asp
			100					105					110		

Val Trp Gly Lys Gly Thr Lys Val Ile Val Ser Ser  
 115 120

<210> 69

<211> 130

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 69

Leu Glu Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg  
 1 5 10 15  
 Leu Ser Cys Val Gly Ser Gly Phe Thr Phe Ser Ser Ala Trp Met Ala  
 20 25 30  
 Trp Val Arg Gln Ala Pro Gly Arg Gly Leu Glu Trp Val Gly Leu Ile  
 35 40 45  
 Lys Ser Lys Ala Asp Gly Glu Thr Thr Asp Tyr Ala Thr Pro Val Lys  
 50 55 60  
 Gly Arg Phe Ser Ile Ser Arg Asn Asn Leu Glu Asp Thr Val Tyr Leu  
 65 70 75 80  
 Gln Met Asp Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys Ala  
 85 90 95  
 Thr Gln Lys Pro Arg Tyr Phe Asp Leu Leu Ser Gly Gln Tyr Arg Arg  
 100 105 110  
 Val Ala Gly Ala Phe Asp Val Trp Gly His Gly Thr Thr Val Thr Val  
 115 120 125  
 Ser Pro  
 130

<210> 70

<211> 130

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 70

Leu Glu Glu Ser Gly Gly Gly Leu Val Lys Ala Gly Gly Ser Leu Arg  
 1 5 10 15  
 Leu Ser Cys Val Gly Ser Gly Phe Thr Phe Ser Ser Ala Trp Met Ala  
 20 25 30  
 Trp Val Gly Gln Ala Pro Gly Arg Gly Leu Glu Trp Val Gly Leu Ile  
 35 40 45  
 Lys Ser Lys Ala Asp Gly Glu Thr Thr Asp Tyr Ala Thr Pro Val Lys  
 50 55 60  
 Gly Arg Phe Ser Ile Ser Arg Asn Asn Leu Glu Asp Thr Val Tyr Leu  
 65 70 75 80  
 Gln Met Asp Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys Ala  
 85 90 95  
 Thr Gln Lys Pro Arg Tyr Phe Asp Leu Leu Ser Gly Gln Tyr Arg Arg  
 100 105 110  
 Val Ala Gly Ala Phe Asp Val Trp Gly His Gly Thr Thr Val Thr Val  
 115 120 125  
 Ser Pro  
 130

<210> 71

<211> 130  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 71  
 Leu Glu Glu Ser Gly Gly Gly Leu Ile Lys Pro Gly Gly Ser Leu Arg  
 1 5 10 15  
 Leu Ser Cys Val Gly Ser Gly Phe Thr Phe Ser Ser Ala Trp Met Thr  
 20 25 30  
 Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Ile Gly Leu Ile  
 35 40 45  
 Lys Ser Lys Ala Asp Gly Glu Thr Thr Asp Tyr Ala Thr Pro Val Lys  
 50 55 60  
 Gly Arg Phe Thr Ile Ser Arg Asn Asn Leu Glu Asn Thr Val Tyr Leu  
 65 70 75 80  
 Gln Met Asp Ser Leu Arg Ala Asp Asp Thr Ala Val Tyr Tyr Cys Ala  
 85 90 95  
 Thr Gln Lys Pro Ser Tyr Tyr Asn Leu Leu Ser Gly Gln Tyr Arg Arg  
 100 105 110  
 Val Ala Gly Ala Phe Asp Val Trp Gly His Gly Thr Thr Val Thr Val  
 115 120 125  
 Ser Pro  
 130

<210> 72  
 <211> 125  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 72  
 Leu Glu Glu Ser Gly Glu Ala Val Val Gln Pro Gly Arg Ser Leu Arg  
 1 5 10 15  
 Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Arg Asn Tyr Ala Met His  
 20 25 30  
 Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Leu Ile  
 35 40 45  
 Lys Tyr Asp Gly Arg Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Arg  
 50 55 60  
 Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met  
 65 70 75 80  
 Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp  
 85 90 95  
 Ile Gly Leu Lys Gly Glu His Tyr Asp Ile Leu Thr Ala Tyr Gly Pro  
 100 105 110  
 Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser  
 115 120 125

<210> 73  
 <211> 125  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

## 313.2C1.TXT

&lt;400&gt; 73

```

Leu Glu Gln Ser Gly Glu Ala Val Val Gln Pro Gly Thr Ser Leu Arg
 1          5          10          15
Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asn Tyr Ala Met His
          20          25          30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Leu Ile
          35          40          45
Lys Tyr Asp Gly Arg Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Arg
          50          55          60
Phe Ser Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Glu Met
          65          70          75          80
Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp
          85          90          95
Ile Gly Leu Lys Gly Glu His Tyr Asp Ile Leu Thr Ala Tyr Gly Pro
          100          105          110
Asp Tyr Trp Gly Gln Gly Ala Leu Val Thr Val Ser Ser
          115          120          125

```

&lt;210&gt; 74

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 74

```

Leu Glu Gln Ser Gly Glu Ala Val Val Gln Pro Gly Arg Ser Leu Arg
 1          5          10          15
Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Arg Asn Tyr Ala Met His
          20          25          30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Leu Ile
          35          40          45
Lys Tyr Asp Gly Arg Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Arg
          50          55          60
Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met
          65          70          75          80
Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp
          85          90          95
Ile Gly Leu Lys Gly Glu His Tyr Asp Ile Leu Thr Ala Tyr Gly Pro
          100          105          110
Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
          115          120          125

```

&lt;210&gt; 75

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 75

```

Leu Glu Glu Ser Gly Glu Ala Val Val Gln Pro Gly Thr Ser Leu Arg
 1          5          10          15
Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asn Tyr Ala Met His
          20          25          30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Leu Ile
          35          40          45
Lys Tyr Asp Gly Arg Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Arg
          50          55          60

```

## 313.2C1.TXT

```

Phe Ser Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Glu Met
65      70      75      80
Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp
      85      90      95
Ile Gly Leu Lys Gly Glu His Tyr Asp Ile Leu Thr Ala Tyr Gly Pro
      100     105     110
Asp Tyr Trp Gly Gln Gly Ala Leu Val Thr Val Ser Ser
      115      120      125

```

<210> 76  
 <211> 125  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 76
Leu Glu Gln Ser Gly Glu Ala Val Val Gln Pro Gly Arg Ser Leu Arg
1      5      10      15
Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Arg Asn Tyr Ala Met His
      20      25      30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Leu Ile
      35      40      45
Lys Tyr Asp Gly Arg Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Arg
      50      55      60
Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met
65      70      75      80
Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp
      85      90      95
Ile Gly Leu Lys Ala Glu His Tyr Asp Ile Leu Thr Ala Tyr Gly Pro
      100     105     110
Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
      115      120      125

```

<210> 77  
 <211> 125  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 77
Leu Glu Gln Ser Gly Glu Ala Val Val Gln Pro Gly Arg Ser Leu Arg
1      5      10      15
Leu Ser Cys Ala Ala Ser Gly Phe Ile Phe Arg Asn Tyr Ala Met His
      20      25      30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Leu Ile
      35      40      45
Lys Tyr Asp Gly Arg Asn Lys Tyr Tyr Ala Asp Ser Val Lys Gly Arg
      50      55      60
Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met
65      70      75      80
Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp
      85      90      95
Ile Gly Leu Lys Gly Glu His Tyr Asp Ile Leu Thr Ala Tyr Gly Pro
      100     105     110
Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
      115      120      125

```

<210> 78  
 <211> 128  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 78  
 Leu Glu Gln Ser Gly Gly Gly Val Val Lys Pro Gly Gly Ser Leu Arg  
 1 5 10 15  
 Leu Ser Cys Glu Gly Ser Gly Phe Thr Phe Pro Asn Ala Trp Met Thr  
 20 25 30  
 Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Val Ala Ser Ile  
 35 40 45  
 Lys Ser Lys Phe Asp Gly Gly Ser Pro His Tyr Ala Ala Pro Val Glu  
 50 55 60  
 Gly Arg Phe Thr Ile Ser Arg Asn Asp Leu Glu Asp Lys Val Phe Leu  
 65 70 75 80  
 Gln Met Asn Gly Leu Lys Ala Glu Asp Thr Gly Val Tyr Tyr Cys Ala  
 85 90 95  
 Thr Arg Tyr Pro Arg Tyr Ser Glu Met Met Gly Gly Val Arg Lys His  
 100 105 110  
 Phe Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Ser Val Ser Ser  
 115 120 125

<210> 79  
 <211> 128  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 79  
 Leu Glu Glu Ser Gly Gly Gly Val Val Lys Pro Gly Gly Ser Leu Arg  
 1 5 10 15  
 Leu Ser Cys Glu Gly Ser Gly Phe Thr Phe Pro Asn Ala Trp Met Thr  
 20 25 30  
 Trp Val Arg Gln Ser Pro Gly Lys Gly Leu Glu Trp Val Ala Ser Ile  
 35 40 45  
 Lys Ser Lys Phe Asp Gly Gly Ser Pro His Tyr Ala Ala Pro Val Glu  
 50 55 60  
 Gly Arg Phe Thr Ile Ser Arg Asn Asp Leu Glu Asp Lys Val Phe Leu  
 65 70 75 80  
 Gln Met Asn Gly Leu Lys Ala Glu Asp Thr Gly Val Tyr Tyr Cys Ala  
 85 90 95  
 Thr Arg Tyr Pro Arg Tyr Ser Glu Met Met Gly Gly Val Arg Lys His  
 100 105 110  
 Phe Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Ser Val Ser Ser  
 115 120 125

<210> 80  
 <211> 122  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

## 313.2C1.TXT

&lt;400&gt; 80

```

Leu Glu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Arg Ser Leu Arg
 1      5      10      15
Val Ser Cys Glu Ala Ser Gly Phe Thr Phe Ser Ser Tyr Glu Met Asn
 20      25      30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gln Ile
 35      40      45
Ser Ser Ser Gly Ser Arg Thr Tyr Tyr Ala Asp Ser Val Lys Gly Arg
 50      55      60
Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu Glu Met
 65      70      75      80
Thr Ser Leu Arg Val Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly
 85      90      95
Arg Arg Leu Val Thr Phe Gly Gly Val Val Ser Gly Gly Asn Ile Trp
 100      105      110
Gly Gln Gly Thr Met Val Thr Val Ser Ser
 115      120

```

&lt;210&gt; 81

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 81

```

Leu Glu Gln Ser Gly Gly Gly Val Val Gln Pro Gly Arg Ser Leu Arg
 1      5      10      15
Leu Ser Cys Ala Gly Ser Gly Phe Asn Phe Ser Asp Asp Thr Met His
 20      25      30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ala Val Ile
 35      40      45
Ser Tyr Glu Gly Ser Asp Lys Tyr Tyr Ala Asp Ser Val Lys Gly Arg
 50      55      60
Phe Thr Ile Ser Arg Asp Asn Ser Glu Asn Thr Leu Tyr Leu Gln Met
 65      70      75      80
Asp Ser Leu Arg Ala Asp Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Asn
 85      90      95
Thr Arg Glu Asn Ile Glu Ala Asp Gly Thr Ala Tyr Tyr Ser Tyr Tyr
 100      105      110
Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser
 115      120      125

```

&lt;210&gt; 82

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 82

```

Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
 1      5      10      15
Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr Leu Ala
 20      25      30
Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Arg Leu Leu Ile Tyr Ala
 35      40      45
Ala Ser Thr Leu Gln Pro Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
 50      55      60

```



## 313.2C1.TXT

```

Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
65          70          75          80
Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Ala Pro Arg Thr Phe
      85          90          95
Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
      100          105

```

<210> 83  
 <211> 106  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 83
Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile Gly Asp Arg
1          5          10          15
Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Asn Asn Tyr Leu Ala
      20          25          30
Trp Tyr Gln Gln Arg Pro Gly Lys Val Pro Arg Leu Leu Ile Tyr Ala
      35          40          45
Ala Ser Thr Leu Gln Ser Gly Val Pro Thr Arg Phe Ser Gly Ser Gly
      50          55          60
Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
65          70          75          80
Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Val Pro Arg Thr Phe
      85          90          95
Gly Gly Gly Thr Lys Val Glu Ile Lys Arg
      100          105

```

<210> 84  
 <211> 107  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 84
Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg
1          5          10          15
Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Asn Tyr Leu Ala
      20          25          30
Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile Tyr Ala
      35          40          45
Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly
      50          55          60
Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
65          70          75          80
Val Ala Thr Tyr Tyr Cys Gln Lys Tyr Asn Ser Ala Pro Arg Thr Phe
      85          90          95
Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr
      100          105

```

<210> 85  
 <211> 106  
 <212> PRT  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 85

Glu	Leu	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Ile	Gly	Asp	Arg
1				5					10					15	
Val	Thr	Ile	Thr	Cys	Arg	Ala	Ser	Gln	Gly	Ile	Asn	Asn	Tyr	Leu	Ala
			20					25					30		
Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Lys	Ala	Pro	Asn	Leu	Leu	Ile	Tyr	Ala
		35					40					45			
Ala	Ser	Thr	Leu	Gln	Ser	Gly	Val	Pro	Pro	Arg	Phe	Ser	Gly	Ser	Gly
	50					55					60				
Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu	Asp
65					70					75					80
Val	Ala	Thr	Tyr	Tyr	Cys	Gln	Lys	Tyr	Asn	Ser	Val	Pro	His	Thr	Phe
			85						90					95	
Gly	Gly	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg						
			100					105							

&lt;210&gt; 86

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 86

Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Leu	Ser	Pro	Gly	Glu	Arg
1				5					10					15	
Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Val	Ile	Ser	Asn	Tyr	Leu
			20					25					30		
Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr
		35					40					45			
Gly	Val	Ser	Asn	Arg	Ala	Thr	Gly	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Leu	Glu	Pro	Glu
65					70					75					80
Asp	Phe	Ala	Val	Tyr	Ser	Cys	Gln	Gln	Tyr	Gly	Thr	Ser	Pro	Trp	Thr
			85						90					95	
Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg	Thr				
			100					105							

&lt;210&gt; 87

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 87

Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Leu	Ser	Pro	Gly	Glu	Arg
1				5					10					15	
Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Val	Ser	Asn	Asn	Tyr	Leu
			20					25					30		
Ala	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr
		35					40					45			
Gly	Ala	Ser	Asn	Arg	Ala	Thr	Gly	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Gly	Ser	Gly	Thr	Ala	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Pro	Glu

## 313.2C1.TXT

```

65          70          75          80
Asp Val Ala Ile Tyr Tyr Cys Gln Gln Tyr His Ser Ser Pro Tyr Thr
      85          90          95
Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
      100          105

```

<210> 88  
 <211> 108  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 88
Glu Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg
 1          5          10          15
Ala Thr Leu Ser Cys Arg Ala Ser His Arg Val Asn Asn Asn Phe Leu
      20          25          30
Ala Trp Tyr Gln Gln Lys Pro Gln Ala Pro Arg Leu Leu Ile Ser Gly
      35          40          45
Ala Ser Thr Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly
      50          55          60
Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Asp Asp
      65          70          75          80
Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Asp Ser Pro Leu Tyr Ser
      85          90          95
Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
      100          105

```

<210> 89  
 <211> 105  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 89
Glu Leu Thr Gln Ser Pro Ala Ser Val Ser Ala Ser Val Gly Asp Thr
 1          5          10          15
Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile His Asn Trp Leu Ala
      20          25          30
Trp Tyr Gln Gln Gln Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala
      35          40          45
Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Arg Gly
      50          55          60
Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp
      65          70          75          80
Phe Ala Thr Tyr Tyr Cys Gln Gln Gly Asn Ser Phe Pro Lys Phe Gly
      85          90          95
Pro Gly Thr Val Val Asp Ile Lys Arg
      100          105

```

<210> 90  
 <211> 107  
 <212> PRT  
 <213> Artificial Sequence

<220>

&lt;223&gt; Synthesized

&lt;400&gt; 90

Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Leu	Ser	Pro	Gly	Glu	Arg
1				5					10					15	
Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Leu	Ser	Asn	Asn	Tyr	Leu
			20					25					30		
Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr
		35					40					45			
Gly	Ser	Ser	Thr	Arg	Gly	Thr	Gly	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Gly
	50					55					60				
Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Leu	Glu	Pro	Glu
65					70					75					80
Asp	Phe	Ala	Val	Tyr	Cys	Gln	His	Tyr	Gly	Asn	Ser	Val	Tyr	Thr	
				85				90					95		
Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg					
			100					105							

&lt;210&gt; 91

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 91

Gln	Ser	Pro	Asp	Thr	Leu	Ser	Leu	Asn	Pro	Gly	Glu	Arg	Ala	Thr	Leu
1				5					10					15	
Ser	Cys	Arg	Ala	Ser	His	Arg	Ile	Ser	Ser	Lys	Arg	Leu	Ala	Trp	Tyr
			20					25					30		
Gln	His	Lys	Arg	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr	Val	Cys	Pro
		35					40					45			
Asn	Arg	Ala	Gly	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly
	50					55					60				
Thr	Asp	Phe	Thr	Leu	Thr	Tyr	Ser	Arg	Leu	Glu	Pro	Glu	Asp	Phe	Ala
65					70					75					80
Met	Tyr	Tyr	Cys	Gln	Tyr	Tyr	Gly	Gly	Ser	Ser	Tyr	Thr	Phe	Gly	Gln
				85				90						95	
Gly	Thr	Lys	Val	Glu	Ile	Thr	Arg								
			100												

&lt;210&gt; 92

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 92

Gln	Ser	Pro	Ser	His	Leu	Ser	Leu	Ser	Pro	Gly	Glu	Arg	Ala	Ile	Leu
1				5					10					15	
Ser	Cys	Arg	Ala	Ser	Gln	Arg	Val	Ser	Ala	Pro	Tyr	Leu	Ala	Trp	Tyr
			20					25					30		
Gln	Gln	Arg	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Val	Ile	Tyr	Gly	Ala	Ser
		35					40					45			
Thr	Arg	Ala	Thr	Asp	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly
	50					55					60				
Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Leu	Glu	Pro	Glu	Asp	Phe	Ala
65					70					75					80

## 313.2C1.TXT

Ile Tyr Tyr Cys Gln Val Tyr Gly Gln Ser Pro Val Leu Phe Gly Gln  
                   85                  90                  95  
 Gly Thr Lys Leu Glu Met Lys Arg  
                   100

<210> 93  
 <211> 105  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 93  
 Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Asp Arg Ala Thr Leu  
   1                  5                  10                  15  
 Ser Cys Arg Ala Ser Gln Ser Leu Ser Ser Phe Leu Ala Trp Tyr  
                   20                  25                  30  
 Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Ser Ala Ser  
                   35                  40                  45  
 Met Arg Ala Thr Gly Ile Pro Asp Arg Phe Arg Gly Ser Val Ser Gly  
                   50                  55                  60  
 Thr Asp Phe Thr Leu Thr Ile Thr Arg Leu Glu Pro Glu Asp Phe Ala  
  65                  70                  75                  80  
 Val Tyr Tyr Cys Gln Arg Phe Gly Thr Ser Pro Leu Tyr Thr Phe Gly  
                   85                  90                  95  
 Gln Gly Thr Lys Leu Glu Met Lys Arg  
                   100                  105

<210> 94  
 <211> 104  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 94  
 Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu  
   1                  5                  10                  15  
 Ser Cys Arg Ala Ser Gln Ser Phe Ser Ser Asn Phe Leu Ala Trp Tyr  
                   20                  25                  30  
 Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Val His Pro  
                   35                  40                  45  
 Asn Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly  
                   50                  55                  60  
 Thr Asp Phe Thr Leu Thr Ile Arg Arg Leu Glu Pro Glu Asp Phe Ala  
  65                  70                  75                  80  
 Val Tyr Tyr Cys Gln Gln Tyr Gly Ala Ser Leu Val Ser Phe Gly Pro  
                   85                  90                  95  
 Gly Thr Lys Val His Ile Lys Arg  
                   100

<210> 95  
 <211> 108  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

&lt;400&gt; 95

Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Leu	Ser	Pro	Gly	Glu	Arg
1				5					10					15	
Ala	Thr	Phe	Ser	Cys	Arg	Ser	Ser	His	Ser	Ile	Arg	Ser	Arg	Arg	Val
			20					25					30		
Ala	Trp	Tyr	Gln	His	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Val	Ile	His
		35					40					45			
Gly	Val	Ser	Asn	Arg	Ala	Ser	Gly	Ile	Ser	Asp	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Thr	Arg	Val	Glu	Pro	Glu
65					70					75					80
Asp	Phe	Ala	Leu	Tyr	Tyr	Cys	Gln	Val	Tyr	Gly	Ala	Ser	Ser	Tyr	Thr
				85					90					95	
Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Arg	Lys	Arg	Thr				
			100					105							

&lt;210&gt; 96

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 96

Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Leu	Thr	Pro	Gly	Glu	Arg
1				5					10					15	
Ala	Thr	Leu	Ser	Cys	Arg	Thr	Ser	His	Ser	Ile	Arg	Ser	Arg	Arg	Leu
			20					25					30		
Ala	Trp	Tyr	Gln	Val	Lys	Gly	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr
		35				40						45			
Gly	Val	Ser	Asn	Arg	Ala	Gly	Gly	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Leu	Glu	Pro	Glu
65					70					75					80
Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Tyr	Gly	Ser	Ser	Arg	Tyr	Thr
				85					90					95	
Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg	Thr				
			100					105							

&lt;210&gt; 97

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 97

Glu	Leu	Thr	Gln	Ala	Pro	Gly	Thr	Leu	Ser	Leu	Ser	Pro	Gly	Glu	Arg
1				5					10					15	
Ala	Thr	Phe	Ser	Cys	Arg	Ser	Ser	His	Ser	Ile	Arg	Ser	Arg	Arg	Val
			20					25					30		
Arg	Trp	Tyr	Gln	His	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Val	Ile	His
		35				40						45			
Gly	Val	Ser	Asn	Arg	Ala	Ser	Gly	Ile	Ser	Asp	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Thr	Arg	Val	Glu	Pro	Glu
65					70					75					80
Asp	Phe	Ala	Leu	Tyr	Tyr	Cys	Gln	Val	Tyr	Gly	Ala	Ser	Ser	Tyr	Thr

85  
 Phe Gly Gln Gly Thr Lys Leu Glu Arg Lys Arg  
 100 105 95

<210> 98  
 <211> 108  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 98  
 Glu Leu Thr Gln Ala Pro Gly Thr Leu Ser Leu Ser Pro Gly Asp Arg  
 1 5 10 15  
 Ala Thr Phe Ser Cys Arg Ser Ser His Asn Ile Arg Ser Arg Arg Val  
 20 25 30  
 Ala Trp Tyr Gln His Lys Pro Gly Gln Ala Pro Arg Leu Val Ile His  
 35 40 45  
 Gly Val Ser Asn Arg Ala Ser Gly Ile Ser Asp Arg Phe Ser Gly Ser  
 50 55 60  
 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Arg Leu Glu Pro Glu  
 65 70 75 80  
 Asp Phe Ala Leu Tyr Tyr Cys Gln Val Tyr Gly Ala Ser Ser Tyr Thr  
 85 90 95  
 Phe Gly Gln Gly Thr Lys Leu Asp Phe Lys Arg Thr  
 100 105

<210> 99  
 <211> 108  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 99  
 Glu Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg  
 1 5 10 15  
 Ala Thr Leu Ser Cys Arg Ala Gly Gln Ser Ile Ser Ser Asn Tyr Leu  
 20 25 30  
 Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr  
 35 40 45  
 Gly Ala Ser Asn Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Ser  
 50 55 60  
 Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Ser Arg Leu Glu Pro Glu  
 65 70 75 80  
 Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Thr Ser Pro Tyr Thr  
 85 90 95  
 Phe Gly Gln Gly Thr Gln Leu Asp Ile Lys Arg Thr  
 100 105

<210> 100  
 <211> 104  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

## 313.2C1.TXT

&lt;400&gt; 100

Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu  
 1 5 10 15  
 Ser Cys Arg Ala Ser Gln Ser Leu Ser Asn Asn Tyr Leu Ala Trp Tyr  
 20 25 30  
 Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Gly Ser Ser  
 35 40 45  
 Thr Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser Gly Gly Ser Gly  
 50 55 60  
 Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala  
 65 70 75 80  
 Val Tyr Tyr Cys Gln Gln Tyr Gly Asn Ser Val Tyr Thr Phe Gly Gln  
 85 90 95  
 Gly Thr Lys Leu Glu Ile Lys Arg  
 100

&lt;210&gt; 101

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 101

Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg  
 1 5 10 15  
 Val Thr Ile Thr Cys Arg Thr Ser Gln Gly Ile Ser Asn Tyr Leu Ala  
 20 25 30  
 Trp Tyr Gln Gln Lys Pro Gly Lys Val Pro Lys Leu Leu Ile Tyr Gly  
 35 40 45  
 Ala Ser Thr Leu Gln Ser Gly Gly Pro Ser Arg Phe Ser Gly Ser Gly  
 50 55 60  
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Asn Ser Leu Gln Pro Glu Asp  
 65 70 75 80  
 Val Ala Thr Tyr Ser Cys Gln Asn Tyr Asp Ser Ala Pro Trp Thr Phe  
 85 90 95  
 Gly Gln Gly Thr Lys Val Asp Ile Lys Arg  
 100 105

&lt;210&gt; 102

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 102

Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg  
 1 5 10 15  
 Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Asn Tyr Leu Asn  
 20 25 30  
 Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala  
 35 40 45  
 Ala Ser Ser Leu Gln Arg Gly Val Pro Ser Arg Phe Ser Gly Ser Gly  
 50 55 60  
 Ser Gly Thr Asp Phe Thr Leu Ser Ile Ser Ser Leu Gln Pro Glu Asp  
 65 70 75 80  
 Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Ile Pro Pro Leu Thr  
 85 90 95



Phe Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr  
 100 105

<210> 103  
 <211> 107  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 103  
 Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg  
 1 5 10 15  
 Val Thr Ile Thr Cys Arg Ala Ser Gln Asn Ile Asn Asn Tyr Leu Asn  
 20 25 30  
 Trp Tyr Gln Gln Lys Pro Gly Glu Ala Pro Lys Leu Leu Ile His Thr  
 35 40 45  
 Ala Phe Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Thr Ala  
 50 55 60  
 Ser Gly Thr Glu Phe Thr Leu Thr Ile Arg Ser Leu Gln Pro Glu Asp  
 65 70 75 80  
 Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr Thr Phe  
 85 90 95  
 Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr  
 100 105

<210> 104  
 <211> 107  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 104  
 Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg  
 1 5 10 15  
 Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn  
 20 25 30  
 Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala  
 35 40 45  
 Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly  
 50 55 60  
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp  
 65 70 75 80  
 Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr Thr Phe  
 85 90 95  
 Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr  
 100 105

<210> 105  
 <211> 107  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 105

## 313.2C1.TXT

Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg  
 1 5 10 15  
 Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn  
 20 25 30  
 Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala  
 35 40 45  
 Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly  
 50 55 60  
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp  
 65 70 75 80  
 Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Gln Thr Phe  
 85 90 95  
 Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr  
 100 105

&lt;210&gt; 106

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 106

Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile  
 1 5 10 15  
 Thr Cys Arg Ala Ser Gln Thr Ile Ser Ser Tyr Leu Asn Trp Tyr Gln  
 20 25 30  
 Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser  
 35 40 45  
 Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Gly Gly Ser Gly Thr  
 50 55 60  
 Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr  
 65 70 75 80  
 Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr Thr Phe Gly Gln Gly  
 85 90 95  
 Thr Lys Leu Glu Ile Lys Arg Thr  
 100

&lt;210&gt; 107

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 107

Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg  
 1 5 10 15  
 Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Arg Asn Tyr Leu Asn  
 20 25 30  
 Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Asp  
 35 40 45  
 Ala Ser Asn Ser Glu Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly  
 50 55 60  
 Ser Gly Arg Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp  
 65 70 75 80  
 Val Ala Thr Tyr Tyr Cys Gln Gln His Gln Asn Val Pro Leu Thr Phe  
 85 90 95  
 Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr

100

105

<210> 108  
 <211> 107  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 108  
 Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg  
 1 5 10 15  
 Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn His Leu Asn  
 20 25 30  
 Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Asp  
 35 40 45  
 Ala Ser Asn Leu Glu Thr Gly Val Pro Ser Arg Phe Ser Gly Ser Gly  
 50 55 60  
 Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp  
 65 70 75 80  
 Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Asn Leu Pro Leu Thr Phe  
 85 90 95  
 Gly Gly Gly Thr Lys Val Glu Ile Lys Arg Thr  
 100 105

<210> 109  
 <211> 108  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 109  
 Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg  
 1 5 10 15  
 Ile Thr Ile Thr Cys Arg Ala Ser Gln Thr Ile Asn Asn Tyr Leu Asn  
 20 25 30  
 Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Gly  
 35 40 45  
 Ala Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly Ser Gly  
 50 55 60  
 Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu Asp  
 65 70 75 80  
 Phe Ala Thr Tyr Phe Cys Gln Gln Ser Tyr Asn Thr Pro Pro Trp Thr  
 85 90 95  
 Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr  
 100 105

<210> 110  
 <211> 108  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 110  
 Glu Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg

## 313.2C1.TXT

```

1           5           10           15
Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Asn Ser Asn Tyr Leu
20           25           30
Ala Trp Tyr Gln Gln Lys Pro Gly Gln Thr Pro Arg Val Val Ile Tyr
35           40           45
Ser Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser Gly Ser
50           55           60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu Pro Glu
65           70           75           80
Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Gly Asp Ala Gln Tyr Thr
85           90           95
Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr
100          105

```

<210> 111  
 <211> 93  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 111
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Arg Val Asn Ser Asn
1           5           10           15
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Thr Pro Arg Val Val
20           25           30
Ile Tyr Ser Thr Ser Arg Arg Ala Thr Gly Val Pro Asp Arg Phe Ser
35           40           45
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
50           55           60
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Phe Gly Asp Ala Gln
65           70           75           80
Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg
85           90

```

<210> 112  
 <211> 104  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 112
Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val Gly Asp Thr Val Thr
1           5           10           15
Phe Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn Tyr Leu Asn Trp Tyr
20           25           30
His Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Ser Asp Ala Ser
35           40           45
Asp Leu Glu Ile Gly Val Pro Ser Arg Phe Ser Gly Ser Gly Ser Ala
50           55           60
Thr Tyr Phe Ser Phe Thr Ile Ser Ser Leu Gln Pro Glu Asp Ile Gly
65           70           75           80
Thr Tyr Tyr Cys Gln Gln Tyr Ala Asp Leu Ile Thr Phe Gly Gly Gly
85           90           95
Thr Lys Val Glu Ile Lys Arg Thr
100

```

<210> 113  
 <211> 96  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 113  
 Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val  
 1 5 10 15  
 Gly Thr Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg  
 20 25 30  
 Leu Leu Ile Phe Asp Ala Ser Thr Arg Asp Thr Tyr Ile Pro Asp Thr  
 35 40 45  
 Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ala Leu Thr Ile Ser Ser  
 50 55 60  
 Leu Gln Ser Glu Asp Phe Gly Phe Tyr Tyr Cys Gln Gln Tyr Asp Asn  
 65 70 75 80  
 Trp Pro Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Val Lys Arg Thr  
 85 90 95

<210> 114  
 <211> 107  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 114  
 Glu Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Asp Arg  
 1 5 10 15  
 Ala Thr Phe Ser Cys Arg Ser Ser His Asn Ile Arg Ser Arg Arg Val  
 20 25 30  
 Ala Trp Tyr Gln His Lys Pro Gly Gln Ala Pro Arg Leu Val Ile His  
 35 40 45  
 Gly Val Ser Asn Arg Ala Ser Gly Ile Ser Asp Arg Phe Ser Gly Ser  
 50 55 60  
 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Arg Leu Glu Pro Glu  
 65 70 75 80  
 Asp Phe Ala Leu Tyr Tyr Cys Gln Val Tyr Gly Ala Ser Ser Tyr Thr  
 85 90 95  
 Phe Gly Gln Gly Thr Lys Leu Asp Phe Lys Arg  
 100 105

<210> 115  
 <211> 107  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 115  
 Glu Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly Glu Arg  
 1 5 10 15  
 Ala Thr Phe Ser Cys Arg Ser Ser His Asn Ile Arg Ser Arg Arg Val  
 20 25 30  
 Ala Trp Tyr Gln His Lys Pro Gly Gln Ala Pro Arg Leu Val Ile His  
 35 40 45

## 313.2C1.TXT

Gly Val Ser Asn Arg Ala Thr Gly Ile Ser Asp Arg Phe Ser Gly Ser  
 50 55 60  
 Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Arg Leu Glu Pro Glu  
 65 70 75 80  
 Asp Phe Ala Leu Tyr Tyr Cys Gln Val Tyr Gly Ala Ser Ser Tyr Thr  
 85 90 95  
 Phe Gly Gln Gly Thr Lys Leu Asp Phe Lys Arg  
 100 105

&lt;210&gt; 116

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 116

Glu Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Asn Val Gly Glu Arg  
 1 5 10 15  
 Ala Thr Leu Ser Cys Arg Ala Ser His Arg Ile Ser Ser Arg Arg Leu  
 20 25 30  
 Ala Trp Tyr Gln His Lys Arg Gly Gln Ala Pro Arg Leu Leu Ile Tyr  
 35 40 45  
 Gly Val Ser Ser Arg Ala Gly Gly Val Pro Asp Arg Phe Ser Gly Ser  
 50 55 60  
 Gly Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Arg Leu Glu Pro Glu  
 65 70 75 80  
 Asp Phe Ala Met Tyr Tyr Cys Gln Thr Tyr Gly Gly Ser Ser Tyr Thr  
 85 90 95  
 Phe Gly Gln Gly Thr Lys Val Asp Ile Lys Arg  
 100 105

&lt;210&gt; 117

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 117

Glu Leu Thr Gln Ser Pro Asp Thr Leu Ser Leu Asn Ala Gly Glu Arg  
 1 5 10 15  
 Ala Thr Leu Ser Cys Arg Ala Ser His Arg Ile Ser Ser Arg Arg Leu  
 20 25 30  
 Ala Trp Tyr Gln His Lys Arg Gly Gln Ala Pro Arg Leu Leu Ile Tyr  
 35 40 45  
 Gly Val Ser Asn Arg Ala Gly Gly Val Pro Asp Arg Phe Ser Gly Ser  
 50 55 60  
 Gly Ser Gly Thr Asp Phe Ser Leu Thr Ile Ser Arg Leu Glu Pro Glu  
 65 70 75 80  
 Asp Phe Ala Ile Tyr Tyr Cys Gln Thr Tyr Gly Gly Ser Ser Tyr Thr  
 85 90 95  
 Phe Gly Gln Gly Thr Thr Val Asp Ile Lys Arg  
 100 105

&lt;210&gt; 118

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 118

Glu	Leu	Thr	Gln	Ser	Pro	Asp	Thr	Leu	Ser	Leu	Asn	Thr	Gly	Glu	Arg
1				5					10					15	
Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	His	Arg	Ile	Gly	Ser	Arg	Arg	Leu
			20					25					30		
Ala	Trp	Tyr	Gln	His	Arg	Arg	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr
		35					40					45			
Gly	Val	Ser	Asn	Arg	Ala	Gly	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser
	50					55				60					
Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Leu	Glu	Pro	Glu
65					70					75					80
Asp	Phe	Ala	Ile	Tyr	Tyr	Cys	Gln	Thr	Tyr	Gly	Gly	Ser	Ser	Tyr	Thr
				85					90					95	
Phe	Gly	Gln	Gly	Thr	Lys	Val	Asp	Ile	Lys	Arg					
			100					105							

&lt;210&gt; 119

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 119

Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Leu	Thr	Pro	Gly	Glu	Arg
1				5					10					15	
Ala	Ile	Leu	Ser	Cys	Lys	Thr	Ser	His	Asn	Ile	Trp	Ser	Arg	Arg	Leu
			20					25					30		
Ala	Trp	Tyr	Gln	Leu	Lys	Ser	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr
		35					40					45			
Gly	Val	Ser	Lys	Arg	Ala	Gly	Gly	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Ser
	50					55				60					
Gly	Ser	Ala	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Val	Glu	Pro	Glu
65					70					75					80
Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Thr	Tyr	Gly	Gly	Ser	Ala	Tyr	Thr
				85					90					95	
Phe	Gly	Gln	Gly	Thr	Lys	Leu	Asp	Ile	Lys	Arg					
			100					105							

&lt;210&gt; 120

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 120

Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Leu	Thr	Pro	Gly	Glu	Arg
1				5					10					15	
Ala	Ile	Leu	Ser	Cys	Lys	Thr	Ser	His	Asn	Ile	Trp	Ser	Arg	Arg	Leu
			20					25					30		
Ala	Trp	Tyr	Gln	Leu	Lys	Ser	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	Tyr
		35					40					45			
Gly	Val	Ser	Lys	Arg	Ala	Gly	Gly	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Ser

## 313.2C1.TXT

	50					55					60				
Gly	Ser	Ala	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Val	Glu	Pro	Glu
65					70					75					80
Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Thr	Tyr	Gly	Gly	Ser	Ala	Tyr	Thr
				85					90					95	
Phe	Gly	Gln	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg					
			100					105							

```
<210> 121
<211> 107
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthesized

<400>	121															
Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Ser	Thr	Pro	Gly	Glu	Arg	
1				5					10					15		
Ala	Ile	Leu	Ser	Cys	Lys	Thr	Ser	His	Asn	Ile	Trp	Ser	Arg	Arg	Leu	
			20					25					30			
Ala	Trp	Tyr	Gln	Val	Lys	Ser	Gly	Leu	Pro	Pro	Arg	Leu	Leu	Ile	His	
		35					40					45				
Gly	Val	Ser	Arg	Arg	Ala	Gly	Gly	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Ser	
	50					55					60					
Gly	Ser	Ala	Arg	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Leu	Glu	Pro	Ala	
65					70					75					80	
Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Thr	Tyr	Gly	Gly	Ser	Ser	Tyr	Ser	
				85					90					95		
Phe	Gly	Gln	Gly	Thr	Lys	Leu	Asp	Phe	Asn	Arg						
			100					105								

```
<210> 122
<211> 107
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> Synthesized

<400>	122															
Glu	Leu	Thr	Gln	Ser	Pro	Gly	Thr	Leu	Ser	Leu	Asn	Pro	Gly	Glu	Arg	
1				5					10					15		
Ala	Val	Leu	Ser	Cys	Arg	Thr	Ser	Arg	Asn	Ile	Trp	Ser	Arg	Arg	Leu	
			20					25					30			
Ala	Trp	Tyr	Gln	Val	Arg	Arg	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile	His	
		35					40					45				
Gly	Val	Ser	Lys	Arg	Ala	Gly	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser	
	50					55					60					
Gly	Ser	Ala	Arg	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Arg	Leu	Glu	Pro	Glu	
65					70					75					80	
Asp	Phe	Ala	Val	Tyr	Phe	Cys	Gln	Thr	Tyr	Gly	Gly	Ser	Ser	Tyr	Thr	
			85						90					95		
Phe	Gly	Gln	Gly	Asn	Lys	Leu	Asp	Ile	Arg	Arg						
			100					105								

```
<210> 123
<211> 126
<212> PRT
<213> Artificial Sequence
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&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 123

Gln	Val	Lys	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly
1			5						10					15	
Ala	Ser	Val	Lys	Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn
			20					25					30		
Phe	Val	Leu	His	Trp	Ala	Arg	Gln	Ala	Pro	Gly	His	Arg	Pro	Glu	Trp
		35					40				45				
Met	Gly	Trp	Ile	Asn	Pro	Ala	Asn	Gly	Val	Thr	Glu	Ile	Pro	Pro	Lys
	50					55					60				
Phe	Gln	Asp	Arg	Val	Ser	Leu	Thr	Arg	Asp	Thr	Ser	Ala	Gly	Thr	Val
65					70				75						80
Tyr	Leu	Glu	Leu	Thr	Asn	Leu	Arg	Phe	Ala	Asp	Thr	Ala	Val	Tyr	Tyr
				85				90					95		
Cys	Ala	Arg	Val	Gly	Glu	Trp	Thr	Trp	Asp	Asp	Ser	Pro	Gln	Asp	Asn
			100					105					110		
Tyr	Tyr	Met	Asp	Val	Trp	Gly	Lys	Gly	Thr	Thr	Val	Thr	Val		
		115					120					125			

&lt;210&gt; 124

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 124

Gln	Val	Lys	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly
1			5						10					15	
Ala	Ser	Val	Lys	Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn
			20					25					30		
Phe	Val	Leu	His	Trp	Ala	Arg	Gln	Ala	Pro	Gly	His	Arg	Pro	Glu	Trp
		35					40				45				
Met	Gly	Trp	Ile	Asn	Pro	Ala	Asn	Gly	Val	Thr	Glu	Ile	Ser	Pro	Lys
	50					55					60				
Phe	Gln	Asp	Arg	Val	Ser	Leu	Thr	Gly	Asp	Thr	Ser	Ala	Ser	Thr	Val
65					70				75						80
Tyr	Leu	Glu	Leu	Arg	Asn	Leu	Arg	Phe	Ala	Asp	Thr	Ala	Val	Tyr	Tyr
				85				90					95		
Cys	Ala	Arg	Val	Gly	Glu	Trp	Thr	Trp	Asp	Asp	Ser	Pro	Gln	Asp	Asn
			100					105					110		
Tyr	Tyr	Met	Asp	Val	Trp	Gly	Arg	Gly	Thr	Thr	Val	Thr			
		115					120					125			

&lt;210&gt; 125

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 125

Gln	Val	Lys	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly
1			5						10					15	
Ala	Ser	Val	Lys	Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn
			20					25					30		

## 313.2C1.TXT

Phe Val Leu His Trp Ala Arg Gln Ala Pro Gly His Arg Pro Glu Trp  
           35                          40                          45  
 Met Gly Trp Ile Asn Pro Ala Asn Gly Val Thr Glu Ile Ser Pro Lys  
           50                          55                          60  
 Phe Gln Asp Arg Val Ser Leu Thr Gly Asp Thr Ser Ala Ser Thr Val  
 65                          70                          75                          80  
 Tyr Leu Glu Leu Arg Ser Leu Arg Phe Ala Asp Thr Ala Val Tyr Tyr  
                           85                          90                          95  
 Cys Ala Arg Val Gly Glu Trp Thr Trp Asp Asp Ser Pro Gln Asp Asn  
                           100                          105                          110  
 Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val  
                           115                          120

&lt;210&gt; 126

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 126

Gln Val Lys Leu Leu Glu Gln Ser Gly Ala Glu Val Lys Lys Pro Gly  
 1                          5                          10                          15  
 Ala Ser Val Lys Ile Ser Cys Gln Ala Ser Gly Tyr Arg Phe Thr Asn  
                           20                          25                          30  
 Phe Val Leu His Trp Ala Arg Gln Ala Pro Gly Gln Arg Pro Glu Trp  
                           35                          40                          45  
 Met Gly Trp Phe Asn Pro Ala Asn Gly Ile Lys Glu Ile Ser Pro Lys  
                           50                          55                          60  
 Phe Gln Asp Arg Val Ser Phe Thr Gly Asp Thr Ser Ala Ser Thr Ala  
 65                          70                          75                          80  
 Tyr Val Glu Leu Arg Asn Leu Arg Ser Ala Asp Thr Ala Val Tyr Tyr  
                           85                          90                          95  
 Cys Ala Arg Val Gly Pro Trp Thr Trp Asp Asp Ser Pro Gln Asp Asn  
                           100                          105                          110  
 Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val  
                           115                          120

&lt;210&gt; 127

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 127

Gln Val Lys Leu Leu Glu Gln Ser Gly Ala Glu Val Lys Lys Pro Gly  
 1                          5                          10                          15  
 Ala Ser Val Lys Val Ser Cys Gln Ala Ser Gly Tyr Arg Phe Ser Asn  
                           20                          25                          30  
 Phe Val Leu His Trp Ala Arg Gln Ala Pro Gly His Arg Pro Glu Trp  
                           35                          40                          45  
 Met Gly Trp Ile Asn Pro Ala Asn Gly Val Thr Glu Ile Ser Pro Lys  
                           50                          55                          60  
 Phe Gln Asp Arg Val Ser Leu Thr Gly Asp Thr Ser Ala Ser Thr Val  
 65                          70                          75                          80  
 Tyr Leu Glu Leu Arg Asn Leu Arg Phe Ala Asp Thr Ala Val Tyr Tyr  
                           85                          90                          95  
 Cys Ala Arg Val Gly Glu Trp Thr Trp Asp Asp Phe Pro Gln Asp Asn

100 105 110  
 Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val  
 115 120

<210> 128  
 <211> 125  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 128  
 Gln Val Lys Leu Leu Glu Gln Ser Gly Ala Glu Val Lys Lys Pro Gly  
 1 5 10 15  
 Ala Ser Val Lys Leu Ser Cys Gln Ala Ser Gly Tyr Arg Phe Ser Asn  
 20 25 30  
 Phe Val Leu His Trp Ala Arg Gln Ala Pro Gly His Arg Pro Glu Trp  
 35 40 45  
 Met Gly Trp Ile Asn Pro Ala Asn Gly Val Thr Glu Ile Ser Pro Lys  
 50 55 60  
 Phe Gln Asp Arg Val Ser Leu Thr Gly Asp Thr Ser Ala Ser Thr Val  
 65 70 75 80  
 Tyr Leu Glu Leu Arg Asn Leu Arg Phe Ala Asp Thr Ala Val Tyr Tyr  
 85 90 95  
 Cys Ala Arg Val Gly Glu Trp Thr Trp Asp Asp Ser Pro Gln Asp Asn  
 100 105 110  
 Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr  
 115 120 125

<210> 129  
 <211> 125  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 129  
 Gln Val Lys Leu Leu Glu Gln Ser Gly Thr Glu Val Lys Lys Pro Gly  
 1 5 10 15  
 Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Arg Phe Thr Asn  
 20 25 30  
 Phe Pro Leu His Trp Val Arg Gln Ala Pro Gly Gln Arg Pro Glu Trp  
 35 40 45  
 Met Gly Trp Ile Lys Ile Val Asn Gly Glu Lys Lys Tyr Ser Gln Lys  
 50 55 60  
 Phe Val Asp Arg Val Thr Phe Thr Gly Asp Thr Ser Ala Asn Thr Ala  
 65 70 75 80  
 Tyr Met Glu Val Arg Gly Leu Arg Ser Ala Asp Thr Ala Thr Tyr Tyr  
 85 90 95  
 Cys Ala Arg Val Gly Glu Trp Thr Trp Asp Met Asp Pro Gln Ala Asn  
 100 105 110  
 Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr  
 115 120 125

<210> 130  
 <211> 124  
 <212> PRT  
 <213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 130

Gln	Val	Lys	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly
1			5						10					15	
Ala	Ser	Val	Lys	Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn
			20					25					30		
Phe	Val	Ile	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Arg	Phe	Glu	Trp
		35					40				45				
Met	Gly	Trp	Ile	Asn	Pro	Tyr	Asn	Gly	Asn	Lys	Glu	Phe	Ser	Ala	Lys
	50					55				60					
Phe	Arg	Asp	Arg	Val	Thr	Phe	Thr	Ala	Asp	Thr	Asp	Ala	Asn	Thr	Ala
65					70				75					80	
Tyr	Met	Glu	Leu	Arg	Ser	Leu	Arg	Ser	Ala	Asp	Thr	Ala	Ile	Tyr	Tyr
			85					90					95		
Cys	Ala	Arg	Val	Gly	Pro	Tyr	Thr	Trp	Asp	Asp	Ser	Pro	Gln	Asp	Asn
			100					105					110		
Tyr	Tyr	Met	Asp	Val	Trp	Gly	Lys	Gly	Thr	Thr	Val				
		115					120								

&lt;210&gt; 131

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 131

Gln	Val	Lys	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly
1			5						10					15	
Ala	Ser	Val	Lys	Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn
			20					25					30		
Phe	Val	Leu	His	Trp	Ala	Arg	Gln	Ala	Pro	Thr	Gln	Asp	Leu	Glu	Trp
		35					40				45				
Met	Gly	Trp	Ile	Asn	Pro	Ala	Asn	Gly	Val	Lys	Glu	Ile	Ser	Pro	Lys
	50					55				60					
Phe	Gln	Asp	Arg	Val	Ser	Leu	Thr	Gly	Asp	Thr	Ser	Ala	Ser	Thr	Val
65					70				75					80	
Tyr	Leu	Glu	Leu	Arg	Ser	Leu	Arg	Phe	Ala	Asp	Thr	Ala	Val	Tyr	Tyr
			85					90					95		
Cys	Ala	Arg	Val	Gly	Glu	Trp	Thr	Trp	Asp	Asp	Ser	Pro	Gln	Asp	Asn
			100					105					110		
Tyr	Tyr	Met	Asp	Val	Trp	Gly	Lys	Gly	Thr	Thr	Val				
		115					120								

&lt;210&gt; 132

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 132

Gln	Val	Lys	Leu	Leu	Glu	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	Pro	Gly
1			5						10					15	
Ala	Ser	Val	Lys	Val	Ser	Cys	Gln	Ala	Ser	Gly	Tyr	Arg	Phe	Ser	Asn
			20					25					30		

## 313.2C1.TXT

Phe	Val	Leu	His	Trp	Ala	Arg	Gln	Ala	Pro	Gly	His	Arg	Pro	Glu	Trp
		35					40				45				
Met	Gly	Trp	Ile	Asn	Pro	Ala	Asn	Gly	Val	Thr	Glu	Ile	Pro	Pro	Lys
	50					55					60				
Phe	Gln	Asp	Arg	Val	Ser	Leu	Thr	Arg	Asp	Thr	Ser	Ala	Gly	Thr	Val
65					70				75					80	
Tyr	Leu	Glu	Leu	Thr	Asn	Leu	Arg	Phe	Ala	Asp	Thr	Ala	Val	Tyr	Tyr
			85						90					95	
Cys	Ala	Arg	Val	Gly	Glu	Trp	Thr	Trp	Asp	Asp	Ser	Pro	Gln	Asp	Asn
			100					105					110		
Tyr	Tyr	Met	Asp	Val	Trp	Gly	Lys	Gly	Thr	Thr	Val				
		115					120								

<210> 133  
 <211> 37  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 133  
 tcgagggtcg gtcggtctct agacggtcgg tcggtca

37

<210> 134  
 <211> 37  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 134  
 ctagtgaccg accgaccgtc tagagaccga ccgaccc

37

<210> 135  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 135  
 cggtcggtcg gtcctcgagg gtcggtcggg ct

32

<210> 136  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 136  
 ctagagaccg accgaccctc gaggaccgac cgaccgagct

40

<210> 137  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized  
  
 <400> 137  
 caaggagaca ggatccatga aatac 25  
  
 <210> 138  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <400> 138  
 agggcgaatt ggatcccggg ccccc 25  
  
 <210> 139  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <400> 139  
 ctagtcatca tcatcatcat taagctagc 29  
  
 <210> 140  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <400> 140  
 ctaggctagc ttaatgatga tgatgatga 29  
  
 <210> 141  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <221> VARIANT  
 <222> 1  
 <223> Xaa = Any Amino Acid  
  
 <400> 141  
 Xaa Ser Ile Ser Ile Gly Pro Gly Arg Ala Phe Tyr Thr Gly Glx Cys  
 1 5 10 15  
  
 <210> 142  
 <211> 126  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized

&lt;400&gt; 142

```

Leu Leu Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Glu Thr Leu Ser
 1      5      10      15
Leu Thr Cys Thr Val Ser Gly Gly Ser Leu Ser Ser Phe Asp Trp Asn
 20      25      30
Trp Ile Arg Gln Pro Ala Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile
 35      40      45
Tyr Pro Ser Gly Asn Thr His Tyr Asn Pro Ser Leu Arg Ser Arg Val
 50      55      60
Thr Met Ser Arg Asp Thr Ser Lys Asn Gln Phe Ser Val Lys Leu Thr
 65      70      75      80
Ser Val Thr Ala Ala Asp Thr Ala Leu Tyr Tyr Cys Ala Arg Glu Asn
 85      90      95
Thr Gly Arg Thr Ile Glu Glu Ile Gly Asn Phe Phe Asp Ile Trp Gly
 100      105      110
Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115      120      125

```

&lt;210&gt; 143

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 143

```

Leu Leu Lys Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg
 1      5      10      15
Leu Ser Cys Val Ile Ser Ala Phe Ser Phe Ser Gly Tyr Asn Ile Asn
 20      25      30
Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Ser Ile
 35      40      45
Ser Met Ser Thr Gly Ser Leu Ser Tyr Ala Asp Ser Met Lys Gly Arg
 50      55      60
Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Val Tyr Leu Glu Met
 65      70      75      80
Ser Ser Leu Thr Ala Glu Asp Thr Ala Met Tyr Tyr Cys Ala Ala Arg
 85      90      95
Thr Pro Leu Val Gly Arg Ala Leu Asp Ile Trp Gly Gln Gly Thr Val
 100      105      110
Val Thr Val Ser Ser Ala Ser Thr Lys Gly
 115      120

```

&lt;210&gt; 144

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 144

```

Leu Leu Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg
 1      5      10      15
Leu Ser Cys Ser Ala Ser Gly Phe Thr Phe Ser Ser Tyr Gly Met Asn
 20      25      30
Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu Trp Val Ala Tyr Ile
 35      40      45
Ser Ser Ser Arg Lys Tyr Thr Glu Tyr Ala Asp Ser Val Lys Gly Arg

```

## 313.2C1.TXT

50		55		60													
Phe	Thr	Ile	Ser	Arg	Glu	Asn	Ala	Lys	Tyr	Ser	Val	Phe	Leu	Gln	Leu		
65					70					75					80		
Asp	Ser	Leu	Thr	Ala	Glu	Asp	Thr	Ala	Ile	Tyr	Tyr	Cys	Ala	Arg	Gly		
				85					90					95			
Arg	Asp	Phe	Tyr	Ser	Gly	Phe	Gly	Arg	Arg	Asp	Asp	Phe	His	Leu	His		
			100					105					110				
Tyr	Met	Asp	Val	Trp	Gly	Lys	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser	Ala		
		115					120					125					
Ser	Thr	Lys	Gly														
		130															

<210> 145  
 <211> 126  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 145																	
Leu	Leu	Glu	Gln	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly	Ser	Leu		
1				5				10						15			
Arg	Ile	Ser	Cys	Val	Ala	Ser	Gly	Asp	Ile	Phe	Tyr	Ser	Tyr	Ala	Met		
			20					25					30				
Ser	Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Glu	Trp	Val	Ala	Ser		
		35					40					45					
Ile	Ser	Gly	Thr	Gly	Gly	Ser	Asn	Tyr	Tyr	Ala	Asp	Ser	Val	Lys	Gly		
		50				55					60						
Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Ser	Thr	Leu	Tyr	Leu	Gln		
65					70					75					80		
Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys	Ala	Arg		
				85					90					95			
Asp	Arg	Gly	Pro	Arg	Ile	Gly	Ile	Arg	Gly	Trp	Phe	Asp	Ser	Trp	Gly		
			100					105					110				
Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser	Ala	Ser	Thr	Lys	Gly				
		115					120					125					

<210> 146  
 <211> 124  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 146																	
Leu	Leu	Glu	Ser	Gly	Gly	Gly	Leu	Val	Gln	Pro	Gly	Gly	Ser	Leu	Arg		
1				5				10						15			
Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Leu	Tyr	Ser	Ser	Phe	Ala	Met	Ser		
			20					25					30				
Trp	Val	Arg	Gln	Ala	Pro	Gly	Lys	Gly	Leu	Ala	Trp	Val	Ser	Thr	Ile		
		35					40					45					
Ser	Ala	Ser	Gly	Gly	Ser	Thr	Lys	Tyr	Ala	Asp	Ser	Val	Lys	Gly	Arg		
		50				55					60						
Phe	Ile	Ile	Ser	Arg	Asp	Asn	Ser	Lys	Asn	Thr	Ile	Tyr	Leu	Gln	Met		
65					70					75					80		
Asp	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Lys	Asn		
				85					90					95			
Phe	Arg	Ala	Phe	Ala	Arg	Asp	Pro	Trp	Gly	Asp	Trp	Gly	Gln	Gly	Thr		
			100					105					110				



Leu Val Thr Val Ser Ser Ala Ser Ala Ser Thr Lys  
 115 120

<210> 147  
 <211> 109  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 147  
 Met Ala Glu Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
 1 5 10 15  
 Glu Arg Val Ile Val Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asn  
 20 25 30  
 Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu  
 35 40 45  
 Ile Tyr Gly Ala Ser Asn Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser  
 50 55 60  
 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu  
 65 70 75 80  
 Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Gly  
 85 90 95  
 Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Thr  
 100 105

<210> 148  
 <211> 112  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 148  
 Met Ala Glu Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
 1 5 10 15  
 Glu Arg Ala Thr Phe Ser Cys Arg Ser Ser His Ser Ile His Thr Arg  
 20 25 30  
 Arg Val Ala Trp Tyr Gln His Lys Pro Gly Gln Ala Pro Arg Leu Val  
 35 40 45  
 Ile His Gly Val Ser Asn Arg Ala Ser Gly Ile Ser Asp Arg Phe Ser  
 50 55 60  
 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Arg Val Glu  
 65 70 75 80  
 Pro Glu Asp Phe Ala Leu Tyr Tyr Cys Gln Val Tyr Gly Ala Ser Ser  
 85 90 95  
 Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Arg Lys Arg Thr Val Val  
 100 105 110

<210> 149  
 <211> 111  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 149

## 313.2C1.TXT

```

Met Ala Glu Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly
 1           5           10           15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Asn Gly
          20           25           30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
          35           40           45
Ile Tyr Gly Ala Ser Thr Arg Ala Thr Asp Ile Pro Asp Arg Phe Ser
          50           55           60
Gly Ser Gly Ser Gly Ala Asp Phe Thr Leu Ala Ile Ser Arg Leu Glu
65           70           75           80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Gly Ser His
          85           90           95
Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys Arg Thr Val Ala
          100          105          110

```

<210> 150  
 <211> 111  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 150
Met Ala Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1           5           10           15
Asp Arg Val Thr Ile Thr Cys Arg Pro Ser Gln Gly Ile Gly Arg Phe
          20           25           30
Phe Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu Ile
          35           40           45
Tyr Ala Ala Asp Ile Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly
          50           55           60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65           70           75           80
Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Tyr
          85           90           95
Thr Phe Gly Gln Gly Thr Arg Leu Asp Ile Lys Arg Thr Val Ala
          100          105          110

```

<210> 151  
 <211> 112  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

```

<400> 151
Met Ala Glu Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
 1           5           10           15
Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Val Ser Ser Ser
          20           25           30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Val
          35           40           45
Ile Phe Gly Ala Tyr Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
          50           55           60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu
65           70           75           80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro
          85           90           95
Ile Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys Arg Thr Val Ala

```

<210> 152  
 <211> 729  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<221> CDS  
 <222> (9)...(716)

<400> 152

```

agcttacc atg ggt gtg ccc act cag gtc ctg ggg ttg ctg ctg ctg tgg  50
      Met Gly Val Pro Thr Gln Val Leu Gly Leu Leu Leu Trp
        1              5              10

ctt aca gat gcc aga tgt gag atc gtt ctc acg cag tct cca ggc acc  98
Leu Thr Asp Ala Arg Cys Glu Ile Val Leu Thr Gln Ser Pro Gly Thr
  15              20              25              30

ctg tct ctg tct cca ggg gaa aga gcc acc ttc tcc tgt agg tcc agt  146
Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Phe Ser Cys Arg Ser Ser
              35              40              45

cac agc att cgc agc cgc cgc gta gcc tgg tac cag cac aaa cct ggc  194
His Ser Ile Arg Ser Arg Arg Val Ala Trp Tyr Gln His Lys Pro Gly
              50              55              60

cag gct cca agg ctg gtc ata cat ggt gtt tcc aat agg gcc tct ggc  242
Gln Ala Pro Arg Leu Val Ile His Gly Val Ser Asn Arg Ala Ser Gly
        65              70              75

atc tca gac agg ttc agc ggc agt ggg tct ggg aca gac ttc act ctc  290
Ile Ser Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
      80              85              90

acc atc acc aga gtg gag cct gaa gac ttt gca ctg tac tac tgt cag  338
Thr Ile Thr Arg Val Glu Pro Glu Asp Phe Ala Leu Tyr Tyr Cys Gln
      95              100             105             110

gtc tat ggt gcc tcc tcg tac act ttt ggc cag ggg acc aaa ctg gag  386
Val Tyr Gly Ala Ser Ser Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu
              115             120             125

agg aaa cga act gtg cct gca cca tct gtc ttc atc ttc ccg cca tct  434
Arg Lys Arg Thr Val Pro Ala Pro Ser Val Phe Ile Phe Pro Pro Ser
              130             135             140

gat gag cag ttg aaa tct ggg act gcc tct gtt gtg tgc ctg ctg aat  482
Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn
              145             150             155

aac ttc tat ccc aga gag gcc aaa gta cag tgg aag gtg gat aac gcc  530
Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala
              160             165             170

ctc caa tcg ggt aac tcc cag gag agt gtc aca gag cag gac agc aag  578
Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys
      175             180             185             190

```

## 313.2C1.TXT

gac agc acc tac agc ctc agc agc acc ctg acg ctg agc aaa gca gac 626  
 Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp  
                   195                  200                  205

tac gag aaa cac aaa gtc tac gcc tgc gaa gtc acc cat cag ggc ctg 674  
 Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu  
                   210                  215                  220

agt tcg ccc gtc aca aag agc ttc aac agg gga gag tgt taa 716  
 Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys \*  
                   225                  230                  235

ttctagagaa ttc 729

<210> 153

<211> 235

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 153

Met Gly Val Pro Thr Gln Val Leu Gly Leu Leu Leu Leu Trp Leu Thr  
 1                  5                  10                  15  
 Asp Ala Arg Cys Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser  
                   20                  25                  30  
 Leu Ser Pro Gly Glu Arg Ala Thr Phe Ser Cys Arg Ser Ser His Ser  
                   35                  40                  45  
 Ile Arg Ser Arg Arg Val Ala Trp Tyr Gln His Lys Pro Gly Gln Ala  
                   50                  55                  60  
 Pro Arg Leu Val Ile His Gly Val Ser Asn Arg Ala Ser Gly Ile Ser  
                   65                  70                  75                  80  
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile  
                   85                  90                  95  
 Thr Arg Val Glu Pro Glu Asp Phe Ala Leu Tyr Tyr Cys Gln Val Tyr  
                   100                  105                  110  
 Gly Ala Ser Ser Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Arg Lys  
                   115                  120                  125  
 Arg Thr Val Pro Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu  
                   130                  135                  140  
 Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe  
                   145                  150                  155                  160  
 Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln  
                   165                  170                  175  
 Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser  
                   180                  185                  190  
 Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu  
                   195                  200                  205  
 Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser  
                   210                  215                  220  
 Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys  
                   225                  230                  235

<210> 154

<211> 3282

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

&lt;221&gt; CDS

&lt;222&gt; (15)...(455)

&lt;400&gt; 154

```

aattcgcgc cacc atg gaa tgg agc tgg gtc ttt ctc ttc ttc ctg tca 50
      Met Glu Trp Ser Trp Val Phe Leu Phe Phe Leu Ser
      1          5          10

gta act aca ggt gtc cac tcc cag gtt cag ctg gtt cag tcc ggg gct 98
Val Thr Thr Gly Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala
      15          20          25

gag gtg aag aag cct ggg gcc tca gtg aag gtt tct tgt cag gct tct 146
Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Gln Ala Ser
      30          35          40

gga tac aga ttc agt aac ttt gtt att cat tgg gtg cgc cag gcc ccc 194
Gly Tyr Arg Phe Ser Asn Phe Val Ile His Trp Val Arg Gln Ala Pro
      45          50          55          60

gga cag agg ttt gag tgg atg gga tgg atc aat cct tac aac gga aac 242
Gly Gln Arg Phe Glu Trp Met Gly Trp Ile Asn Pro Tyr Asn Gly Asn
      65          70          75

aaa gaa ttt tca gcg aag ttc cag gac aga gtc acc ttt acc gcg gac 290
Lys Glu Phe Ser Ala Lys Phe Gln Asp Arg Val Thr Phe Thr Ala Asp
      80          85          90

aca tcc gcg aac aca gcc tac atg gag ttg agg agc ctc agg tct gca 338
Thr Ser Ala Asn Thr Ala Tyr Met Glu Leu Arg Ser Leu Arg Ser Ala
      95          100          105

gac acg gct gtt tat tat tgt gcg aga gtg ggg cca tat agt tgg gat 386
Asp Thr Ala Val Tyr Tyr Cys Ala Arg Val Gly Pro Tyr Ser Trp Asp
      110          115          120

gat tct ccc cag gac aat tat tat atg gac gtc tgg ggc aaa gga acc 434
Asp Ser Pro Gln Asp Asn Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr
      125          130          135          140

acg gtc atc gtg agc tca gct tccaccaagg gcccatcggt cttccccctg 485
Thr Val Ile Val Ser Ser Ala
      145

gcaccctcct ccaagagcac ctctgggggc acagcggccc tgggctgcct ggtcaaggac 545
tacttccccg aaccggtgac ggtgtcgtgg aactcaggcg ccctgaccag cggcgtgcac 605
accttccccg ctgtcctaca gtctctcagga ctctactccc tcagcagcgt ggtgaccgtg 665
ccctccagca gcttgggcac ccagacctac atctgcaacg tgaatcaciaa gcccagcaac 725
accaaggtgg acaagaaagt tggtagagagg ccagcacagg gagggagggt gtctgctgga 785
agccaggctc agcgctcctg cctggacgca tcccggtat gcagccccag tccagggcag 845
caaggcaggc cccgtctgcc tcttcacccg gaggcctctg cccgccccac tcatgctcag 905
ggagagggtc ttctggcttt ttccccaggc tctgggcagg cacaggctag gtgccccata 965
cccaggccct gcacacaaag gggcaggtgc tgggctcaga cctgccaaga gccatatccg 1025
ggaggaccct gccctgacc taagcccacc ccaaaggcca aactctccac tccctcagct 1085
cggacacctt ctctcctccc agattcgagt aactcccaat cttctctctg cagagcccaa 1145
atcttgtgac aaaactcaca catgcccacc gtgcccagggt aagccagccc aggcctcgcc 1205
ctccagctca aggcgggaca ggtgccctag agtagcctgc atccaggagc aggcctcagc 1265
cgggtgctga cacgtccacc tccatctctc cctcagcacc tgaggccgag ggaggaccat 1325
cagtcttctt cttcccccca aaacccaagg acaccctcat gatctcccgg acccctgagg 1385
tcacatgcgt ggtggtggac gtgagccacg aagaccctga ggtcaagttc aactggtacg 1445
tggacggcgt ggaggtgcat aatgccaaaga caaagccgag ggaggagcag tacaacagca 1505
cgtaccgtgt ggtcagcgtc ctcaccgtcc tgcaccagga ctggctgaat ggcaaggagt 1565
acaagtgcaa ggtctccaac aaagccctcc cagcccccat cgagaaaacc atctccaaag 1625

```

## 313.2C1.TXT

```

ccaaagggtgg gacccgtggg gtgcgagggc cacatggaca gaggccggct cggcccaccc 1685
tctgccctga gagtgaaccg tgtaccaacc tctgtcccta cagggcagcc ccgagaacca 1745
caggtgtaca ccctgcccc atcccgggat gagctgacca agaaccaggt cagcctgacc 1805
tgccctgggtca aaggcttcta tcccagcgac atcgccgtgg agtgggagag caatgggcag 1865
ccggagaaca actacaagac cagcctcccc gtgctggact ccgacggctc cttcttcttc 1925
tacagcaagc tcaccgtgga caagagcagg tggcagcagg ggaacgtctt ctcatgctcc 1985
gtgatgcatg aggctctgca caaccactac acgcagaaga gcctctccct gtctccgggt 2045
aaatgagtgc gacggccggc aagccccgc tccccgggct ctgcgggtcg cacgaggatg 2105
cttggcacgt accccctgta catacttccc gggcgcccag catggaaata aagcaccag 2165
cgctgccctg gggccctgag agactgtgat ggttctttcc acgggtcagg ccgagtctga 2225
ggcctgagtg gcatgaggga ggcagagcgg gtcccactgt cccacactg gccaggctg 2285
tgcaggtgtg cctgggcccgc ctagggtggg gctcagccag gggctgccct cggcagggtg 2345
ggggatttgc cagcgttgcc ctcccctcag cagcacctgc cctgggctgg gccacgggaa 2405
gccctaggag cccctgggga cagacacaca gcccctgcct ctgtaggaga ctgtcctgtt 2465
ctgtgagcgc cctgtcctcc gacctccatg cccactcggg ggcattgccta gtccatgtgc 2525
gtaggacag gccctccctc acccatctac cccacaggca ctaaccctg gctgtcctgc 2585
ccagcctcgc acccgcatgg ggacacaacc gactccgggg acatgcactc tcgggccctg 2645
tggagggagt ggtgcagatg cccacacaca cactcagtc agacccgttc aacaaaaccc 2705
ccgactgag gttggccggc cacacggcca ccacacac acgtgcacgc ctacacacg 2765
gagcctcacc cgggcgaact gcacagcacc cagaccagag caaggtcctc gcacacgtga 2825
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&lt;210&gt; 155

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 155

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20      25      30
Pro Gly Ala Ser Val Lys Val Ser Cys Gln Ala Ser Gly Tyr Arg Phe
35      40      45
Ser Asn Phe Val Ile His Trp Val Arg Gln Ala Pro Gly Gln Arg Phe
50      55      60
Glu Trp Met Gly Trp Ile Asn Pro Tyr Asn Gly Asn Lys Glu Phe Ser
65      70      75      80
Ala Lys Phe Gln Asp Arg Val Thr Phe Thr Ala Asp Thr Ser Ala Asn
85      90      95
Thr Ala Tyr Met Glu Leu Arg Ser Leu Arg Ser Ala Asp Thr Ala Val
100     105     110
Tyr Tyr Cys Ala Arg Val Gly Pro Tyr Ser Trp Asp Asp Ser Pro Gln
115     120     125
Asp Asn Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Ile Val
130     135     140
Ser Ser
145

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&lt;210&gt; 156

&lt;211&gt; 13254

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 156

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## 313.2C1.TXT

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## 313.2C1.TXT

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